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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,549	05/31/2001	Jun Miyokawa	205473US8	7563

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OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC  
FOURTH FLOOR  
1755 JEFFERSON DAVIS HIGHWAY  
ARLINGTON, VA 22202

EXAMINER

LOUIE, WAI SING

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/867,549

Applicant(s)

MIYOKAWA ET AL.

Examiner

Wai-Sing Louie

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

Claims 1-61 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-62 of copending Application No. 09/867,449. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9-14, 16, 18-22, 27-32, 34, 36-40, 45, 47-49, 55-56, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Janssen et al. (US 5,570,444).

With regard to claims 1, 19, and 37, Janssen et al. disclose an optical assembly (col. 2, line 66 to col. 4, line 62 and fig. 3) comprising:

- A laser diode 3 having an active layer;
- An optical system including an optical fiber 4 and a lens 5, the optical system being configured to receive and transmit a beam emitted from the laser diode 1 through the lens to the optical fiber along an optical axis (fig. 3);
- A holder 6 configured to receive a portion of the optical system;

- A base 9 having a holder mounting member 6 and a fastening member 8, the holder 6 being mounted to the sliding (fastening) member 8 at a first joint (weld) position 11, the fastening member 8 being mounted to the holder mounting member 6 at a second joint (weld) position 12, where the first and second joint positions are coplanar with the active layer (fig. 3);
- A bottom plate 2 configured to support the base 9, where the first and second joint (weld) positions are located at substantially a same distance from the bottom plate.

With regard to claims 2, 20, 38, and 47, Janssen et al. disclose the holder 6 is configured to receive a portion of the optical fiber 4 (fig. 3).

With regard to claims 3, 21, 39, and 48, Janssen et al. disclose the lens is a discrete lens supported by the holder-mounting member 6 (fig. 3).

With regard to claims 4, 22, 40, and 49, Janssen et al. disclose the discrete lens is mounted within the holder 6 (fig. 3).

With regard to claims 9, 27, and 45, Janssen et al. disclose:

- A plurality of first joint positions 11 (fig. 3);
- A plurality of second joint positions 12 (fig. 3);
- The plurality of first joint positions and the plurality of second joint position are coplanar (fig. 3).

With regard to claims 10 and 28, Janssen et al. disclose the plurality of first joint positions 11 include at least one joint position on the first side of the holder 6 and at least one joint position on a second side of the holder 6 opposite the first side (fig. 3).

With regard to claims 11 and 29, Janssen et al. disclose the plurality of second joint positions 12 include at least one joint position on the first side of the sliding member 8 and at least one joint position on a second side of the sliding member 8 opposite the first side (fig. 3).

With regard to claims 12-13 and 30-31, Janssen et al. disclose the plurality of second joint positions 12 are symmetrically oriented on opposing sides of the holder 6 about the optical axis and the sliding member 8 (fig. 3).

With regard to claims 14 and 32, Janssen et al. disclose the first and second joint positions for mounting the holder and the sliding member are laser welding (col. 4, lines 3-12).

With regard to claims 16 and 34, Janssen et al. disclose the sliding (fastening) member 8 is coupled to the holder 6 at a location adjacent the lens of the optical assembly (fig. 3).

With regard to claims 18, 36, and 55, Janssen et al. disclose the first and second joint positions are coplanar along a plane extending through a longitudinal axis of the optical fiber (fig. 3).

With regard to claim 56, Janssen et al. disclose:

- A base 2 includes a laser diode 3, mounting member 1 configured to mount the laser diode at a laser mounting region;
- The fastening means 1 is disposed mounting laser I the laser diode mounting region (fig. 3)
- The fastening means mounting member 1 projects in the longitudinal direction of the optical fiber mounting side of the laser diode-mounting member 1 (fig. 3).

With regard to claim 58, Janssen et al. disclose the lens formed on the tip end of the optical fiber and is arranged opposite a light-emitting facet of the laser diode 3 (fig. 3).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 23, 41, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al. (US 5,570,444) in view of Miki et al. (US 6,094,515).

With regard to claims 5, 23, 41, and 50, Janssen et al. disclose the assembly comprises of one lens. However, Miki et al. disclose an optical module having two lenses 16 and 26 (fig. 3). Miki et al. teach lens 26 is a condenser lens and lens 16 is a collimator lens to confine the light into the optical fiber (Miki col. 7, lines 22-33). Therefore, it would have been obvious to one with ordinary skill in the art to provide a second lens in order to confine the light into the optical fiber. Janssen et al. do not disclose a package including the bottom plate, which configures to support the second lens and the optical fiber. However, Miki's device includes a housing 2 and a bottom wall 6 configured to support the second lens and the optical fiber (Miki col. 4, lines 8-13 and fig. 2). Miki et al. teach the housing is for sealing the optical module (Miki col. 4, lines 9-11). Therefore, it would have been obvious to one with ordinary skill in the art to provide a housing so that the optical module would be sealed and be protected.

Claims 6-8, 17, 24-26, 35, 42-44, 51-54, and 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al. (US 5,570,444) in view of Yoshino (US 5,924,290).

With regard to claims 6, 24, 42, and 51, Janssen et al. do not disclose an optical isolator. However, Yoshino discloses an optical assembly including an optical isolator 8 (fig. 2). Yoshino teaches the optical isolator 8 serves to prevent reflected light of the output light beam from entering the optical fiber (Yoshino col. 6, lines 17-19). Therefore, it would have been obvious to one with ordinary skill in the art to provide an optical isolator in order to prevent the reflected light from entering the optical fiber. Janssen et al. disclose the optical assembly is configured to receive and transmit the beam emitted from the laser diode through the lens and the isolator to the optical fiber along an optical axis (fig. 3).

With regard to claims 7-8, 25-26, 43-44, and 52-53, Janssen et al. do not disclose the third and fourth joint position. However, Janssen et al., modified by Yoshino in claim 6 above, would have the optical isolator. One with ordinary skill in the art would use the same method to mount the optical holder 6 and the optical isolator. Therefore, the side of the isolator would be laser-welded to an additional sliding member 8, which is supported by an additional block 9. Therefore, it is obvious that this side welding (third joint position) would be located at substantially a same distance from the bottom plate as first and second joint positions. Janssen et al. teach the optical module would go through many thermal cycle and the stress-relief type movements would provoke the joint efficiency (col. 1, lines 13-16). One with ordinary skill in the art would add another laser-weld in the front or the back of the optical isolator, which is 90° to the first, second, and third joint positions as a cross-bracing. Therefore, it is obvious to have a fourth joint position to mount the optical isolator in order to secure the device. The fourth joint

position would be located at substantially a same distance from the bottom plate as first, second, and third joint positions.

With regard to claims 17, 35, and 54, Janssen et al. do not disclose a thermo module coupling the base to the bottom plate. However, Yoshino discloses an optical assembly including a peltier unit 6, which comprises a first plate 6b attached to a portion of the module's base 5a, a peltier element 6a attached to the first plate 6b, and a second plate 6c attached to the peltier element 6a and the first plate 6b (Yoshino col. 5, lines 42-48 and fig. 2). Janssen et al. modified by Yoshino would have a package 5, which configures to accommodate and the laser diode, the optical module, and the peltier unit. The package includes the bottom plate 5a (Yoshino fig. 2).

With regard to claims 60 and 61, Janssen et al. do not disclose the sliding (fastening) member 8 is formed of a Fe-Ni-Co alloy. However, Yoshino teaches the Fe-Ni-Co alloy is known as "kovar", which has a low thermal expansion coefficient similar to ceramic (Yoshino col. 3, lines 6-14). Therefore, it is obvious to form the fastening member with "kovar". It is because the device is welded together and the low thermal expansion will minimize the thermal stress.

Claims 15, 33, 46, 57, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al. (US 5,570,444).

With regard to claims 15 and 33, Janssen et al. do not disclose the recessed portions on the holder-mounting member. However, Jansen et al. provide block 9 as structural support to the sliding member 8. Two blocks together would form a recess between blocks. Therefore, it is obvious there is a recess between two blocks (fig. 3).



With regard to claim 46, in addition to the limitations disclosed in claim 1, 19, and 37, Janssen et al. also disclose:

- Janssen et al. do not disclose the fastening means (sliding member) for fixing the portion of the optical system by supporting and clamping the holder 6 on the sides. However, one skilled in the art would choose clamping as an alternative to laser welding. This is merely a design choice;
- A bottom plate 2 configured to support the base 9, the sliding member 8, the holder 6, the optical assembly, and the laser diode 3.

With regard to claim 57, Janssen et al do not disclose the laser diode-mounting member 1 has a reinforcement portion, which has a lower surface that is out contact with the peltier unit. However, one skilled in the art could arrange the laser diode-mounting member to meet need of the design. This is merely a design choice.

With regard to claim 59, Janssen et al. do not disclose the lens 5 is an anamorphic lens. However, one skilled in the art would choose a lens to meet the match the output of the laser diode and the configuration of the fiber. Therefore, it is obvious to choose an anamorphic lens if needed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (703) 305-0474. The examiner can normally be reached on 7:30 AM to 4:00 PM.


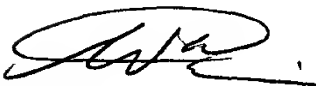
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703) 306-2794. The fax phone numbers for the

Art Unit: 2814

organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

wsl  
May 2, 2002



OLIK CHAUDHURI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800